Problem 40 & web problem. In the circuit shown:

a. What is the equivalent resistance for all 4 resistors?
b. What is the current in the 1 Ω resistor?
c. What is the current in the 3 Ω resistor?
d. What is the current in the 2 Ω resistor?
e. What is the current in the 6 Ω resistor?

\[ \frac{1}{R_P} = \frac{1}{3} + \frac{1}{2} + \frac{1}{6} = 1 \]
\[ R_P = 1 \Omega \]
\[ R_S = 1 + 1 = 2 \Omega \]

\[ I = 3 \text{ A} \text{ in } 1 \Omega \text{ + 1 \Omega for } R_P \]

\[ V \text{ for } R_P = 3 \text{ V} \]
\[ \text{each resistor in parallel has } 3 \text{ V} \]
\[ I = \frac{V}{R} = \frac{3}{3} = 1 \text{ A} \]
\[ d) \ I_2 = \frac{3}{2} = 1.5 \text{ A} \]
\[ e) \ I_6 = \frac{2}{6} = 0.5 \text{ A} \]